

ABSTRACT OF THE DISCLOSURE

A monolithic ink-jet printhead includes a substrate having an ink chamber, a manifold, and an ink channel in flow communication, a nozzle plate including a plurality of passivation layers stacked on the substrate and a heat dissipating layer stacked on the passivation layers, a nozzle for ejecting ink penetrating the nozzle plate, a heater provided between adjacent passivation layers above the ink chamber, and a conductor between adjacent passivation layers, the conductor being electrically connected to the heater, wherein the heat dissipating layer is made of a thermally conductive metal for dissipating heat from the heater, the lower part of the nozzle is formed by penetrating the plurality of passivation layers, and the upper part of the nozzle is formed by penetrating the heat dissipating layer in a tapered shape in which a cross-sectional area thereof decreases gradually toward an exit thereof.